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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.           | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------------|------------------|
| 10/651,592   | 08/29/2003  | Andrew Ching Tam     | 60717-300503<br>(SJO000019US) | 9286             |
| 32112  | 7590        | 05/04/2004           | EXAMINER                      |                  |
| INTELLECTUAL PROPERTY LAW OFFICE<br>1901 S. BASCOM AVENUE, SUITE 660<br>CAMPBELL, CA 95008 |             |                      | ELVE, MARIA ALEXANDRA         |                  |
|  |             |                      | ART UNIT                      | PAPER NUMBER     |

1725

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                   |  |
|------------------------------|--------------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/651,592 | <b>Applicant(s)</b><br>TAM ET AL. |  |
|                              | <b>Examiner</b><br>M. Alexandra Elve | <b>Art Unit</b><br>1725           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 38-45 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 38-45 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 29 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/29/03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 38-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Strom (US Pat. 5,982,583).

Strom discloses controlling the crown curvature and camber (cross curvature) of a slider such that the air-bearing surface has a desirable curvature. A laser melts and cools the slider surface generating a curvature on the bearing surface. The crown and camber changes are functions of the laser scan line density and the laser fluence. The slider is mounted while surface is altered. In one embodiment a pulsed YAG laser is used and the laser spot has a diameter of about 40 microns. Smaller diameter laser scanning spots may be used. Additionally, it has been found that increasing the laser fluence (by adjusting the focus and power of the laser beam) and changing the scan direction yields larger anisotropies, that is, curvature changes. Laser fluence may be used instead of power because it accounts for an increase in laser scan line width as the energy of the laser is increased. (abstract, figures, col. 1, lines 65-67, col. 2, lines 12-50, col. 3, lines 26-40, col. 5, lines 4-59, col. 6, lines 13-33, col. 7, lines 33-44, col. 8, lines 4-18)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strom, as stated above.

Strom does not teach a movable mount for a focusing lens. Strom does disclose the changing of the focus, that thus the lens or workpiece must be moved. The changing of the focus is an apparatus limitation and furthermore, making elements adjustable was held to have been obvious. In re Stevens 101 USPQ 284 and the provision of mechanical or automated means to replace manual activity was held to have been obvious. In re Venner 120 USPQ 192.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strom, as stated above, and in view of Khlif (US Pat. 6,662,069).

Strom does not teach the use of a beam expander. Khlif teaches a slider which has independently controlled crown and cross curvature. The curvature changes on the air-bearing surface are made by use of a laser beam. A fiber optic cable is coupled to a scanner through a system of lenses, which expand the 0.5 mm diameter beam to a collimated beam of about 8 mm in diameter. (abstract, figures, col. 5, lines 65-67, col. 6,

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lines 1-29) It would have been obvious to one of ordinary skill in the art at the time of the invention to use a beam expander, as taught by Khlif in the Strom system because the very independently controlled crown and cross curvatures which result from beam expansion.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Strom, as stated above, and in view of Khlif (US 2002/0179861 A1).

Strom does not teach the mass production of sliders. Khlif discloses the curvature adjustment of sliders using light beams. Once the bearing surface features have been formed the bars are diced along a plurality of dice lines into individual slider bodies. (abstract, figures, 0043) It would have been obvious to one of ordinary skill in the art at the time of the invention to produce a multiples of sliders, as taught by Khlif in the Strom system been this enhances production efficiency.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See US PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is 571-272-1173. The examiner can normally be reached on 6:30-3:00 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 30, 2004.



M. ALEXANDRA ELVE  
PRIMARY EXAMINER